Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of processing data transfer requests, the method comprising:

determining whether a first data transfer request crosses a boundary address associated with an address space, and, if it does not, transferring data identified by the first data transfer request to or from an input/output device, and, if it does:

determining if the first data transfer request is indicated as being combinable with subsequent data transfer requests, and

transferring data identified by the first data transfer request to or from an input/output device according to results of determining if the first data transfer request is indicated as being combinable with subsequent data transfer requests.

2. (Original) The method of claim 1, further comprising:

determining whether a previous data transfer request has been indicated as combinable, and if it has been indicated as combinable:

determining that a new data transfer request is addressed adjacent to the previous data transfer request.

3. (Previously Presented) The method of claim 2, wherein determining that the new data transfer request is addressed adjacent comprises:

determining that the new data transfer request is addressed within a specified minimum number of blocks as the previous data transfer request.

4. (Original) The method of claim 2, wherein a specified minimum number of boundary address crossings are determined before indicating data transfer requests may be combinable.

5. (Previously Presented) The method of claim 2, further comprising:

defining a boundary block length that is at least two blocks; and

determining the first data transfer request crosses an address equal to a multiple of the boundary block length before indicating the first data transfer request may be combinable.

6. (Previously Presented) The method of claim 5, further comprising:

setting a first tracking address equal to a multiple of the boundary block length;

determining a second data transfer request crosses the first tracking address; and

indicating the second data transfer request may be combinable with subsequent data transfer requests.

7. (Previously Presented) The method of claim 5, wherein the boundary block length is a power of two, and wherein determining whether the first data transfer request crosses a boundary address comprises:

determining whether a most significant bit of the boundary block length is equal to a most significant bit of the first data transfer request address.

8. (Original) The method of claim 6, further comprising:

tracking at least two separate sequential streams for sequential handling.

9. (Original) The method of claim 8, wherein tracking further comprises:

storing a tracking address and a corresponding tracking address counter value for each tracked sequential stream.

10. (Original) The method of claim 9, further comprising:

incrementing one of the tracking address counters for each data transfer request determined adjacent to a previous data transfer request; and

indicating that one of the tracked sequential streams may be released as a combined I/O transfer when a corresponding one of the tracking address counters is greater than a specified maximum value.

11. (Original) The method of claim 10, further comprising:

decrementing one of the tracking address counters for each data transfer request determined not adjacent to a previous data transfer request.

12. (Currently Amended) An article comprising a machine-readable medium that stores machine-executable instructions for detecting sequential data transfer requests, the instructions causing a machine to:

determine whether a first data transfer request crosses a boundary address associated with an address space, and, if it does not, transfer data identified by the first data transfer request to or from an input/output device, and, if it does:

determine if the first data transfer request is indicated as being combinable with subsequent data transfer requests, and

transfer data identified by the first data transfer request to or from an input/output device according to results of determining if the first data transfer request is indicated as being combinable with subsequent data transfer requests.

13. (Original) The article of claim 12, further comprising instructions causing a machine to:

determine whether a previous data transfer request has been indicated as combinable, and if it has been indicated as combinable:

determine that a new data transfer request is addressed adjacent to the previous data transfer request.

14. (Previously Presented) The article of claim 13, wherein determining that the new data transfer request is addressed adjacent comprises determining that the new data transfer request is addressed within a specified minimum number of blocks as the previous data transfer request.

15. (Original) The article of claim 13, wherein a specified minimum number of boundary address crossings are determined before indicating data transfer requests may be combinable.

16. (Previously Presented) The article of claim 13, further comprising instructions causing a machine to:

define a boundary block length that is at least two blocks; and

determine the first data transfer request crosses an address equal to a multiple of the boundary block length before indicating the first data transfer request may be combinable.

17. (Previously Presented) The article of claim 16, further comprising instructions causing a machine to:

set a first tracking address equal to a multiple of the boundary block length;

determine a second data transfer request crosses the first tracking address; and

indicate the second data transfer request may be combinable with subsequent data transfer requests.

18. (Previously Presented) The article of claim 16, wherein the boundary block length is a power of two, and wherein determining whether the first data transfer request crosses a boundary address comprises determining whether a most significant bit of the boundary block length is equal to a most significant bit of the first data transfer request address.

19. (Original) The article of claim 16, wherein at least two separate sequential streams are tracked for sequential handling, wherein the article further comprises instructions causing a machine to:

store a tracking address and a corresponding tracking address counter value for each tracked sequential stream.

20. (Original) The article of claim 19, further comprising instructions causing a machine to:

increment one of the tracking address counters for each data transfer request determined adjacent to a previous data transfer request; and

indicate that one of the tracked sequential streams may be released as a combined I/O transfer when a corresponding one of the tracking address counters is greater than a specified maximum value.

21. (Original) The article of claim 20, further comprising instructions causing a machine to:

decrement one of the tracking address counters for each data transfer request determined not adjacent to a previous data transfer request.

22. (Currently Amended) Apparatus comprising:

an input/output device;

a computer processing device configured to

detect sequential data transfer requests;

determine whether a first data transfer request crosses a boundary address associated with an address space of the input/output device, and, if it does not, transfer data identified by the first data transfer request to or from the input/output device, and, if it does:

determine if the first data transfer request is indicated as being combinable with subsequent data transfer requests, and

transfer data identified by the first data transfer request to or from the input/output device according to results of determining if the first data transfer request is indicated as being combinable with subsequent data transfer requests.

23. (Previously Presented) The apparatus of claim 22, wherein the computer processing device is further configured to:

determine whether a previous data transfer request has been indicated as combinable, and if it has been indicated as combinable:

determine that a new data transfer request is addressed adjacent to the previous data transfer request.

24. (Previously Presented) The apparatus of claim 23, wherein determining that the new data transfer request is addressed adjacent comprises determining that the new data transfer request is addressed within a specified minimum number of blocks as the previous data transfer request.

25. (Previously Presented) The apparatus of claim 23, wherein a specified minimum number of boundary address crossings are determined before indicating data transfer requests may be combinable.

26. (Previously Presented) The apparatus of claim 23, wherein the computer processing device is further configured to:

define a boundary block length that is at least two blocks; and

determine the first data transfer request crosses an address equal to a multiple of the boundary block length before indicating the first data transfer request may be combinable.

27. (Previously Presented) The apparatus of claim 26, wherein the computer processing device is further configured to:

set a first tracking address equal to a multiple of the boundary block length;

determine a second data transfer request crosses the first tracking address; and

indicate the second data transfer request may be combinable with subsequent data transfer requests.

28. (Previously Presented) The apparatus of claim 26, wherein the boundary block length is a power of two, and wherein determining whether the first data transfer request crosses a boundary address comprises determining whether a most significant bit of the boundary block length is equal to a most significant bit of the first data transfer request address.

29. (Previously Presented) The apparatus of claim 26, further configured to:

track at least two separate sequential streams for sequential handling.